



**PFR10V300CT**  
**PFR10V300CTF**  
**PFR10V300CTB**

the following features are made possible in a single device:

### Major ratings and characteristics

Characteristics	Values	Units
$I_{F(AV)}$ Rectangular Waveform	10	A
$V_{RRM}$	300	V
$V_F@5A, T_j=125^\circ C$	0.71	V, typ
$T_j(\text{operating/storage})$	-65 to 175	$^\circ C$

**Device optimized for ultra-low forward voltage drop to maximize efficiency in Power Supply applications**





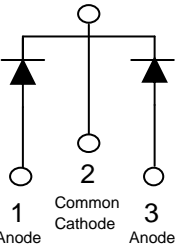
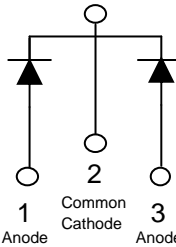
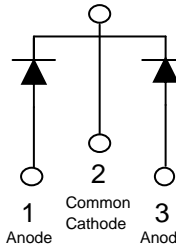
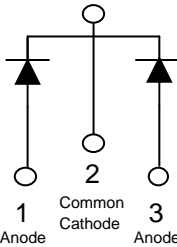
### ELECTRICAL:

- \* Ultra-Low Forward Voltage Drop
- \* Reliable High Temperature Operation
- \* Softest, fast switching capability
- \* 175 $^\circ C$  Operating Junction Temperature
- \* Lead Free Finish, RoHS Compliant

### MECHANICAL:

- \* Molded Plastic TO-220AB and TO-263 and ITO-220 packages

### Case Styles

<b>PFR10V300CT</b>	<b>PFR10V300CTF</b>	<b>Not Available</b>	<b>PFR10V300CTB</b>
			
			
TO-220AB	ITO-220AB	TO-262	TO-263



## Maximum Ratings and Electrical Characteristics

(at 25°C unless otherwise specified)

	SYMBOL			UNITS
DC Blocking Voltage Working Peak Reverse Voltage Peak Repetitive Reverse Voltage	$V_{RM}$ $V_{RWM}$ $V_{RRM}$	300		Volts
Average Rectified Forward Current (Rated $V_R$ -20Khz Square Wave) - 50% duty cycle	$I_O$	10		Amps
Peak Forward Surge Current - 1/2 60hz	$I_{FSM}$	150		Amps
Instantaneous Forward Voltage (per leg) $I_F = 5A; T_J = 25^\circ C$ $I_F = 5A; T_J = 125^\circ C$	$V_F^*$	Typ --- ---	Max 0.89 0.77	Volts
Maximum Instantaneous Reverse Current at Rated $V_{RM}$ $T_J = 25^\circ C$ $T_J = 125^\circ C$	$I_R$	Typ --- ---	Max 0.1 10	mA mA
Maximum Rate of Voltage Change (at Rated $V_R$ )	dv/dt	10,000		V/uS
Maximum Thermal Resistance JC (per leg) Package = TO-220AB, TO-263 Package = ITO-220	$R_{\theta JC}$	2 4		°C/W
Isolation voltage (ITO-220 only)	$V_{AC}$	1500		V
Operating Junction Temperature	$T_J$	-65 to +175		°C
Storage Junction Temperature	$T_{STG}$	-65 to +175		°C

\* Pulse width < 300 uS, Duty cycle < 2%



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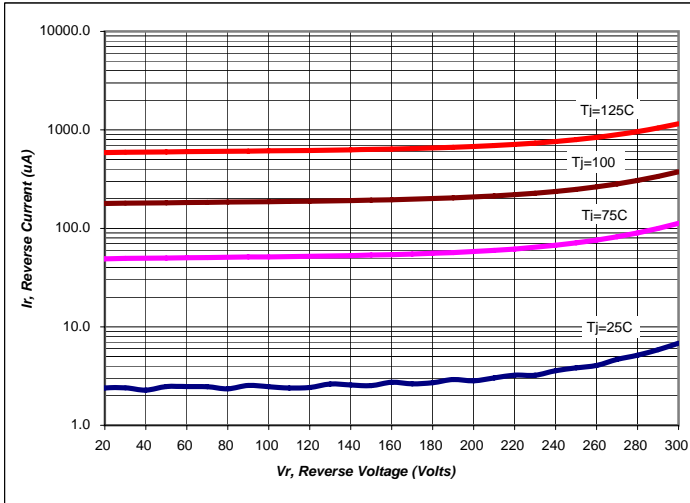


Figure 1: Typical Reverse Current

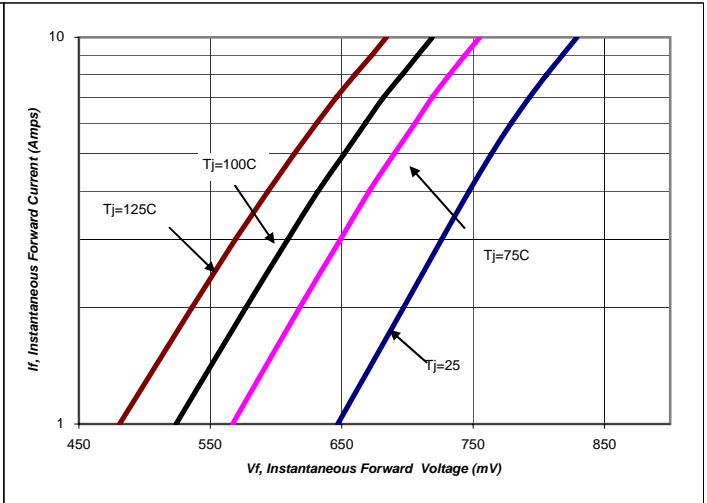


Figure 2: Typical Forward Voltage

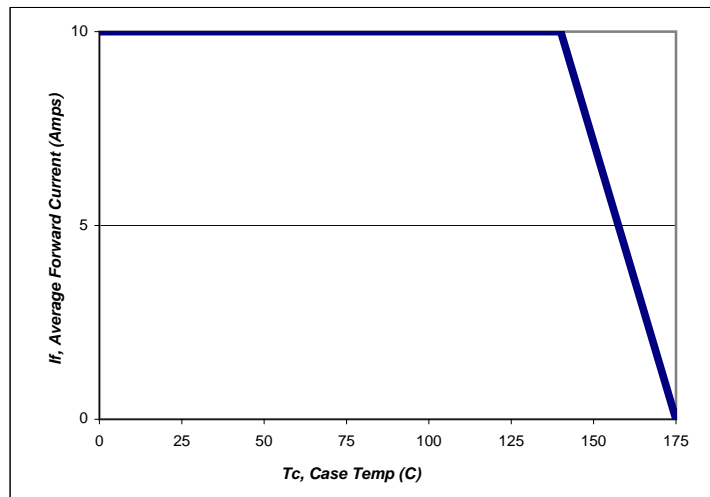


Figure 3: Current Derating, Case (per leg)



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## Ordering information

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<b>Part Number</b>	<b>Case</b>	<b>Packaging</b>
PFR10V300CT	TO-220	50 pieces / tube
PFR10V300CTH	TO-220	50 pieces / tube
PFR10V300CTF	ITO-220	50 pieces / tube
PFR10V300CTFH	ITO-220	50 pieces / tube
PFR10V300CTB	TO-263	50 pieces / tube
PFR10V300CTBH	TO-263	50 pieces / tube

Note: For Halogen Free molding compound, add "H" suffix to part number above.

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## Marking information

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PFC PFR  
10V300CT  
YYWW ABH

PFR10V300CT = Product Type Marking Code  
YYWW = Date Code  
YY = Last two digits of year  
WW = Week code  
AB = Assembly code  
H = Halogen Free (N/A = common molding compound)

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